Preliminary Classification:

**Proposed Class:** 

Subclass:

NOTE:

"All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand corner of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129." M.P.E.P. § 601, 7th ed.

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Director of the U.S. Patent and Trademark Office Mail Stop PATENT APPLICATION P.O. Box 1450 Alexandria, VA 22313-1450

#### **NEW APPLICATION TRANSMITTAL**

Transmitted herewith for filing is the patent application of

Inventor(s): Jani OLLIKAINEN, Clemens ICHELN and Pertti VAINIKAINEN

**WARNING:** 37 C.F.R.§ 1.41(a)(1) points out:

"(a) A patent is applied for in the name or names of the actual inventor or inventors.

"(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.63, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(I) is filed supplying or changing the name or names of the inventor or inventors."

For (title): **Diversity Antenna Arrangement** 

## CERTIFICATION UNDER 37 C.F.R. § 1.10\*

(Express Mail label number is mandatory) (Express Mail certification is optional.)

I hereby certify that this New Application Transmittal and the documents referred to as attached therein are being deposited with the United States Postal Service on this date, February 23, 2004, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number EV 435647670 US, addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

> Annemarie Maher or print name of person mailing paper) Signature of person mailing paper

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. § 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

**WARNING:** Each paper or fee filed by "Express Mail" must have the number of the "Express Mail"

mailing label placed thereon prior to mailing. 37 C.F.R. § 1.10(b).

Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

(New Application Transmittal [4-1] page 1 of 11)

# 1. Type of Application This new application is for a(n) (check one applicable item below) ☑ Original (nonprovisional) □ Design □ Plant WARNING: "Do not use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C. § 37(c)(4), unless the International Application is being filed as a divisional, continuation or continuation-in-part application. WARNING: Do not use this transmittal for the filing of a provisional application. If one of the following 3 items apply, then complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION IN PARENT APPLICATION OF THE FILING OF THIS CONTINUATION APPLICATION. П Divisional

## 2. Benefit of Prior U.S. Application(s) (35 U.S.C. §§ 119(e), 120, or 121)

NOTE: A nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications or copending international applications designating the United States of America. In order for a nonprovisional application to claim the benefit of a prior filed copending nonprovisional application or copending international application designating the United States of America, each prior application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention claimed in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 U.S.C. § 112. Each prior application must also be:

- (i) An international application entitled to a filing date in accordance with PCT Article 11 and designated the United States of America; or
- (ii) Complete as set forth in § 1.51(b); or

Continuation-in-part (C-I-P)

- (iii) Entitled to a filing date as set forth in § 1.53(b) or § 1.53(d) and include the basic filing fee set forth in § 1.16; or
- (iv) Entitled to a filing date as set forth in § 1.53(b) and have paid therein the processing and retention fee set forth in § 1.21(l) within the time period set forth in § 1.53(f).

37 C.F.R. § 1.78(a)(1).

Continuation

NOTE: If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

WARNING: If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. §§ 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. §§ 120,121 or 365(c). (35 U.S.C. § 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. §§ 199, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

WARNING:		IG:	When the last day of pendency of a provisional application falls on a Saturday, Sunday, Federal holiday within the District of Columbia, any nonprovisional application claiming benefit of the provisional application must be filed prior to the Saturday, Sunday, or Federal holiday within the District of Columbia. See 37 C.F.R. § 1.78(a)(3).	ng
			The new application being transmitted claims the benefit of prior U.s application(s). Enclosed are ADDED PAGES FOR NEW APPLICATIO TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(SCLAIMED.	Ν
3.	Pap	pers	Enclosed	
	<u>17</u>	1.1 _ Pa _ Pa	uired for filing date under 37 C.F.R. § 1.53(b) (Regular) or 37 C.F.R. § 3 (Design) Application ges of specification ges of claims ets of drawings	§
	WARNIN NOTE:		S: DO NOT submit original drawings. A high quality copy of the drawings should a supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standard according to § 1.84. If corrections to the drawings are necessary, they should a made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. For comments of proposed then-new 37 C.F.R. § 1.84, see Notice of March 9, 1988 (1990 O.G. 57-62)	he ds be ng
			"Identifying indicia, if provided, should include the application number or the title of the invention, inventor's name, docket number (if any), and the name and telephone number a person to call if the Office is unable to match the drawings to the proper application. The information should be placed on the back of each sheet of drawing a minimum distance 1.5 cm (5/8 inch) down from the top of the page " 37 C.F.R. § 1.84(c)).	of nis
			(complete the following, if applicable)	
			The enclosed drawing(s) are photograph(s), and there is also attached "PETITION TO ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 3 C.F.R. § 1.84(b).	a 37
			The enclosed drawing(s) are in color. Three (3) sets of color drawing and a "PETITION TO ACCEPT COLOR DRAWING(S)" are attached. 3 C.F.R. §§ 1.84(a)(2) and 1.84(b).	js  7
		×	formal informal	
	В.	Oth	er Papers Enclosed	
	0 1 0	_ Pa	ges of declaration and power of attorney ges of abstract er	
4.	Ad	ditio	nal papers enclosed	
		Am	endment to claims	
		the	cel in this application claims before calculating filing fee. (At least one original independent claim must be retained for purposes.)	
		bee	the claims shown on the attached amendment. (Claims added have numbered consecutively following the highest numbered original ns.)	

	Pre	liminary Amendment							
	info	rmation Disclosure Statement (37 C.F.R. § 1.98)							
	For	m PTO-1449 (PTO/SB/08A and 08B)							
	Cita	ations							
	De	Declaration of Biological Deposit							
_	am	omission of "Sequence Listing," computer readable copy and/or endment pertaining thereto for biotechnology invention containing eleotide and/or amino acid sequence							
		horization of Attorney(s) to Accept and Follow Instructions from presentative							
	Spe	ecial Comments							
	Oth	er							
5. De	clar	ation or oath (including power of attorney)							
NOTE:	A ne that bein mati appi copy are unde deci in a	A newly executed declaration is not required in a continuation or divisional application provided that the prior nonprovisional application contained a declaration as required, the application being filed is by all or fewer than all the inventors named in the prior application, there is no nematter in the application being filed, and a copy of the executed declaration filed in the prior application (showing the signature or an indication thereon that it was signed) is submitted. To copy must be accompanied by a statement requesting deletion of the names of person(s) where the application being filed. If the declaration in the prior application was filed under § 1.47, then a copy of that declaration must be filed accompanied by a copy of the decision granting § 1.47 status or, if a nonsigning person under § 1.47 has subsequently joint in a prior application, then a copy of the subsequently executed declaration must be filed. Set 37 C.F.R. §§ 1.63(d)(1)-(3).							
NOTE:	whic give resid	A declaration filed to complete an application must be executed, identify the specification to which it is directed, identify each inventor by full name including family name and at least one given name, without abbreviation together with any other given name or initial, and the residence, post office address and country or citizenship of each inventor, and state whether the inventor is a sole or joint inventor. 37 C.F.R. § 1.63(a)(1)-(4).							
NOTE:	deci oath appi to § is fil	e inventorship of a nonprovisional application is that inventorship set forth in the oath or aration as prescribed by § 1.62, except as provided for in § 1.53(d)(4) and § 1.63(d). If an or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional ication, the inventorship is that inventorship set forth in the application papers filed pursuant 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(I) ed supplying or changing the name or names of the inventor or inventors." 37 C.F.R. § (a)(1).							
•		Enclosed							
		Executed by							
		(check all applicable boxes)							
		□ inventor(s).							
		□ legal representative of inventor(s). 37 C.F.R. §§ 1.42 or 1.43.							
		$\hfill \Box$ joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.							
		☐ This is the petition required by 37 C.F.R. § 1.47 and the statement required by 37 C.F. R. § 1.47 is also attached. See item 13 below for fee.							
	X	Not Enclosed							

NO:	TE:	COM App may	npletion lication be, u	e filing is a completion in the U.S. of an International Application or where the n of the U.S. application contains subject matter in addition to the International n, the application may be treated as a continuation or continuation-in-part, as the case utilizing ADDED PAGE FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT R U.S. APPLICATION CLAIMED.					
				Application is made by a person authorized under 37 C.F.R. § 1.41(c) on behalf of <i>all</i> the above named inventor(s).					
(	The	dec	larati	ion or oath, along with the surcharge required by 37 C.F.R. § 1.16(e) can be filed subsequently).					
				☐ Showing that the filing is authorized.  (not required unless called into question. 37 C.F.R. § 1.41(d))					
6.	Inv	ento	orshi	p Statement					
WA	RNIN	G:	the o	named inventors are each not the inventors of all the claims an explanation, including wnership of the various claims at the time the last claimed invention was made, should ubmitted.					
The	e inv	ento	orship	o for all the claims in this application is:					
		The	e san	ne.					
				or					
			Not the same. An explanation, including the ownership of the various claims at the time the last claimed invention was made,						
			is su	ubmitted.					
			will l	be submitted					
7.	Lar	ngua	age						
NOTE:		Eng of \$	lish. 7 130.00	ation including a signed oath or declaration may be filed in a language other than An English translation of the non-English language application and the processing fee . Dequired by 37 C.F.R. § 1.17(k) is required to be filed with the application, or within as may be set by the Office. 37 C.F.R. § 1.52(d).					
		×		English Non English					
				The attached translation includes a statement that the translation is accurate. 37 C.F.R. § 1.52(d).					
8.	Ass	sign	men	t					
		×	An a	assignment of the invention to Nokia Corporation					
				is attached. A separate □ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or □ FORM PTO 1595 is also attached.					
			X	will follow.					
NOT	TE:			ignment is submitted with a new application, send two separate letters-one for the n and one for the assignment." Notice of May 4, 1990 (1114 O.G. 77-78).					

WARNIN	IG:			RTIFICATE UND lication is filed by				
				divisional ap				
						Reel _		
							)	
9. Ce	rtifie	d Copy						
Се	rtified	d copy(ies	) of applic	ation(s)				
Co	untry	,		Appli	n. No.			Filed
Со	untry	<u> </u>		Applr	n. No.			Filed
from w	hich i	priority is	claimed:					
		is (are) at will follow						
NOTE: NOTE:	or de This pare unde item OF I	eclaration. 3 item is for nt U.S. app er 35 U.S.C. 18 on the P PRIOR U.S.	7 C.F.R. § 1. any foreign p dication or Ir § 120 is itse ADDED PAG	ng the basis for the 55(a) and 1.63. oriority for which international Applies for FOR NEW ADN(S) CLAIMED.  § 1.16)	the app cation f ity from	olication being from which thi n a prior foreig	filed directly s application n application,	relates. If any claims benefit then complete
A.	X	Regu	ılar applica	ition				
				CLAIMS AS	FILE	)	· · · · · · · · · · · · · · · · · · ·	
Numbe	er file	d		Number Extra	3	Rate		Basic Fee . § 1.16(a) \$770.00
Total C (37 C.F		_	<b>35</b> - 20 =	15	×	\$18.00 =		270.00
		t Claims } 1.16(b))	<b>5</b> - 3 =	2	x	\$86.00 =		172.00
		endent cl C.F.R. § 1.			+	\$290.00		
		Amendm Fee for e	ent deletin xtra claims	ing extra claim g multiple-dep s is not being p	ender aid at	ncies is encl this time.		
NOTE:	ame	ndment, pri	or to the ex	re not paid on fili piration of the ti se of fee deficienc	me pei	riod set for re	sponse by ti	
		Filing	Fee Calc	ulation			\$	1,212.00

(New Application Transmittal [4-1] page 6 of 11)

В.		Design applica (\$310.00 - 37				
		•		ing Fee Calculation		\$
C.		Plant applicati	on			
		(\$480.00 - 37	C.F.	R. § 1.16(g))		
			Fil	ing Fee Calculation		\$
11. Small	Entit	y Statement(s	<b>;</b> )			
		ent(s) that this (are) attached.	is a	filing by a small ent	ity under	37 C.F.R. §§ 1.9 and
WARNING:	whice pate which has divise 1.53 entite application to the design of the control	th the status is average that does not affect on a character or continuation, or continuation, or the filing of the character of the payment of the character of the charac	railable t any direct The on-in- f a re- tity state enefit provis prior of the	e and desired. Status a other application or patify dependent upon the able refiling of an application require atus for the continuing of under 35 U.S.C. § 110 discation map application or the mapplication or the napplication or in the patific the patent and status in the patent and status or papers.	as a small e tent, includi pplication on incomment uned prosect s a new det r reissue app 19(e), 120, atement file eissue appli ent or include s as a sman tory filing fe	ch application or patent in entity in one application or ng applications or patents repatent in which the status § 1.53 as a continuation, rution application under § termination as to continued polication. A nonprovisional 121, or 365(c) of a prior d in the prior application or cation includes a reference es a copy of the statement II entity is still proper and e will be treated as such a
WARNING:	state	ement can <b>unequi</b> rev. 2, July 1996 (	vocal emph	lly make the required se asis added).	lf-certificatio	or persons signing the n." M.P.E.P., § 509.03, 6 <sup>th</sup>
	_			lete the following, if		
				entity was claimed in		
		benefit is bein	g cla	, filed on imed for this applica	ation unde	, from which r:
		35 U.S.C.		120, 121, 365(c),		
				us as a small entity	·	
				the statement in the		
		Filing	Fee	Calculation (50% of		•
				\$		
ä	are file	ed within 2 months	of the			ement and a refund request . The two-month period is
12. Reque	st fo	r Internationa	I-Typ	oe Search (37 C.F.F	R. § 1.104	(d))
			(cor	nplete, if applicable)	•	
				tional-type search reation on the merits t		this application at the e.

(New Application Transmittal [4-1] page 7 of 11)

# 13. Fee Payment Being Made at This Time

X	Not	Enclosed		
	☑ No filing fee is to be paid at this time.  (This and the surcharge required by 37 C.F.R. § 1.16(e) can be subsequently.)			
	End	closed		
		Filing fee	\$	
		Recording assignment (\$40.00 – 37 C.F.R. § 1.21(h)) (See attached "COVER SHEET FOR ASSIGNMENT ACCOMPANYING NEW APPLICATION.")	\$	
		Petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached.  (\$130.00 - 37 C.F.R. §§ 1.47 and 1.17(i))	\$	
		For processing an application with a specification in a non-English language (\$130.00; 37 C.F.R. §§ 1.52(d) and 1.17(k))	\$	
		Processing and retention fee (\$130.00, 37 C.F.R. §§ 1.52(d) and 1.21(I))	\$	
		Fee for international-type search report (\$40.00; 37 C.F.R. § 1.21(e))	\$	
NOTE:	abar as th a pri	C.F.R. § 1.21(I) establishes a fee for processing and retaining any ap indoned for failing to complete the application pursuant to 37 C.F.R. § 1.53(f) ne changes to 37 C.F.R. §§ 1.53 and 1.78(a)(1), indicate that in order to obta- for U.S. application, either the basic filing fee must be paid, or the processing of § 1.21(I) must be paid, within 1 year from the notification under § 53(f).	and this, as well ain the benefit of	
	Tot	\$		
14. Me	thod	I of Payment of Fees		
	☐ Attached is a ☐ check ☐ money order in the amount of \$			
	Authorization if hereby made to charge the amount of \$			
		to Deposit Account No		
		to credit card as shown on the attached credit card inform authorization form PTO-2038	nation	
□ in	Cha the	arge any additional fees required by this paper or credit any or manner authorized above. A duplicate of this transmittal is a	verpayment tached.	
NOTE:		s should be itemized in such a manner that it is clear for which purpose the $f$ R. § 1.22(b).	ees are paid. 37	

(New Application Transmittal [4-1] page 8 of 11)

## 15. Authorization to Charge Additional Fees

WARNING:		If no fees are to be paid on filing, the following items should <u>not</u> be completed.					
WARNING:		Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges, if extra claim charges are authorized.					
		The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No					
		☐ 37 C.F.R. § 1.16(a), (f), or (g) (filing fees) ☐ 37 C.F.R. § 1.16(b), (c), and (d) (presentation of extra claims)					
NOTE:	pres the 1.16	ause additional fees for excess or multiple dependent claims not paid on filing or on later tentation must only be paid or these claims canceled by amendment prior to the expiration of time period set for response by the P.T.O. in any notice of fee deficiency (37 C.F.R. § (d)), it might be best not to authorize the P.T.O. to charge additional claim fees, exceptibility when dealing with amendments after final action.					
		☐ 37 C.F.R. § 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)					
		☐ 37 C.F.R. § 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a))					
		☐ 37 C.F.R. § 1.17 (application processing fees)					
WARNING:		"A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. § 1.136(a)(3).					
		☐ 37 C.F.R. § 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. § 1.311(b))					
NOTE:	mail	ere an authorization to charge the issue fee to a deposit account has been filed before the ing of a Notice of Allowance, the issue fee will be automatically charged to the deposit ount at the time of mailing the Notice of Allowance. 37 C.F.R. § 1.311(b).					
NOTE:	to si is be r	C.F.R. § 1.28(b) requires "Notification of any change in status resulting in loss of entitlement mall entity status must be filed in the application prior to paying, or at the time of paying, sue fee." From the wording of 37 C.F.R. § 1.28(b), (a) notification of change of status must made even if the fee is paid as "other than a small entity" and (b) no notification is required in change is to another small entity.					

# 16. Instructions as to Overpayment

Customer No. **004955** 

10. 1113	uuc	octions as to Overpayment	
NOTE:	a re dolla	.Amounts of twenty-five dollars or less will not be returned unless specifically requeste reasonable time, nor will the payer be notified of such amounts; amounts over twe ollars may be returned by check or, if requested, by credit to a deposit account." 37 (26(a).	nty-five
		Credit Account No	
		Refund	
			//
Date: F	ebr	oruary 23, 2004 SIGNATURE OF PRACTITION	4
Reg. No	o. <b>2</b>	SIGNATURE OF PRACTITION 27,550	IEK
Tel. No	. (20	203) 261-1234  Alfred A. Fressola (type or print name of practition	_ ier
		Ware, Fressola, Van Der Sluy & Adolphson, LLP P.O. (Correspondence) Addres	_
		Building Five, Bradford Gree 755 Main Street, P.O. Box 224	

Monroe, CT 06468

	Inc	ncorporation by reference of added pages						
	prio sta the	eck the following item if the application in this transmittal claims the benefit or U.S. application(s) (including an international application entering the U.S ge as a continuation, divisional or C-I-P application) and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE NEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.)						
		Plus Added Pages for New Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed						
	_	Number of pages added						
		Plus Added Pages for Papers Referred to in Item 4 Above						
		Number of pages added						
		Plus added pages deleting names of inventor(s) named in prior application(s) who is/are no longer inventor(s) of the subject matter claimed in this application.						
		Number of pages added						
		Plus "Assignment Cover Letter Accompanying New Application"						
		Number of pages added						
X	Sta	tement Where No Further Pages Added						
		(if no further pages form a part of this Transmittal, then end this Transmitta with this page and check the following item.						
	×	This transmittal ends with this page.						